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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,311	11/26/2001	Joseph C. Kaufman	01173.0001U3	9570

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NEEDLE & ROSENBERG P C  
127 PEACHTREE STREET N E  
ATLANTA, GA 30303-1811

EXAMINER

HORLICK, KENNETH R

ART UNIT	PAPER NUMBER
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1637

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DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/994,311	<b>Applicant(s)</b> KAUFMAN ET AL.	
	<b>Examiner</b> Kenneth R Horlick	<b>Art Unit</b> 1637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,117,121 and 126-137 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,117,121 and 126-137 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.5 (23 pages)                      6) ☐ Other: \_\_\_\_\_

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 121 and 132 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sapolsky et al. (US 5,710,000) in view of Jones (US 5,858,671).

Sapolsky et al. disclose a method comprising: incubating a nucleic acid sample with a first restriction enzyme to produce fragments; ligating an offset adaptor to the fragments; cleaving the ligated fragments with a type IIs restriction enzyme for which a recognition sequence is provided in said offset adaptor; and ligating a second adaptor to the fragments, producing a sample nucleic acid sequence flanked by an adaptor at both ends. The sample sequence between the adaptors is then amplified and detected by hybridization probes, which may be immobilized on an array. The adaptor-fragment-adaptor molecules of Sapolsky et al. cannot be distinguished from the "binary sequence

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tags" of the instant claims. See especially column 4, lines 6-49; column 6, lines 3-34; column 8, lines 15-50; column 10, line 50 to column 12, line 16; and column 16, line 53 to column 19, line 59.

This patent does not disclose attachment of single adaptor strands to fragments and subsequently treating said strands to produce double-stranded segments.

Jones discloses that when attaching offset adaptors to fragments, single adaptor strands may be ligated first, followed by hybridization of a second strand to form double-stranded regions (see column 38, lines 45-55).

One of ordinary skill in the art would have been motivated to modify the ligation method of Sapolsky et al. by first attaching one strand of an adaptor and subsequently treating to generate the second strand because Jones et al. disclosed that this was a good means of generating double-stranded adaptor sequences. It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to carry out the claimed methods.

2. It is noted that claims 1, 117, 126-131, and 133-137 comprise limitations which were determined to confer patentability over the prior art including Sapolsky et al. in the parent '751 application; namely using a non-type IIS restriction enzyme as the first nucleic acid cleaving reagent (claims 1, 117, 126-131, and 133); adding the recited hybridization and detecting steps (claims 134 and 136); or using second nucleic acid cleaving reagents which do not cleave in the recognition sequences of the first nucleic

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acid cleaving reagents (claims 135 and 137). None of these limitations are present in claims 121 and 132.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 117, 121, and 126-137 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-131 of U.S. Patent No. 6,383,754. Although the conflicting claims are not identical, they are not patentably distinct from each other because of a species-genus or genus-obvious species type relationship.

4. Claims 1, 117, 126-131, and 133-137 are free of the prior art, but are rejected for other reasons. No claims are allowable.

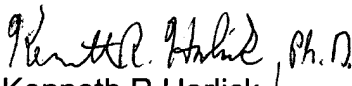
5. Kato (US 5,707,807) is made of record as a reference of interest.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth R Horlick whose telephone number is 703-308-3905. The examiner can normally be reached on Monday-Thursday 6:30AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 703-308-1119. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4242 for regular communications and 703-308-0294 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

  
Kenneth R Horlick  
Primary Examiner  
Art Unit 1637

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May 6, 2003